

CLAIMS

1. A driving method of a self-luminous display apparatus having a plurality of self-luminous elements comprising each of pixels placed like a matrix in a pixel row direction and a pixel line direction and driving a display portion by passing a current between an anode and a cathode of each of the self-luminous elements and thereby emitting light from each of the pixels, the driving method comprising:

a first process of acquiring a first amount of current to be passed between the anode and the cathode correspondingly to video data inputted from outside, and acquiring a predetermined single value as the first amount of current irrespective of a status of video data value distribution around the video data;

a second process of acquiring a second amount of current to be passed between the anode and the cathode correspondingly to the video data inputted from outside, where, regarding the second amount of current, a value, which has the first amount of current suppressed at a predetermined ratio according to the status of video data value distribution around the video data, is prepared, and of performing a processing in which the ratio of

suppression is variable according to the status of video data value distribution,

wherein the amount of current passing through each pixel line is controlled based on a result of the first or second processing instrument so as to emit light from the display portion.

2. The driving method of a self-luminous display apparatus according to claim 1, wherein the first amount of current applied between the anode and the cathode of each of the corresponding self-luminous elements is determined by the first process when a gradation value of the video data inputted from outside is on a lower gradation side of performing a black display than a first predetermined gradation value.

3. The driving method of a self-luminous display apparatus according to claim 1, wherein the second amount of current x applied between the anode and the cathode of each of the corresponding self-luminous elements is determined by the second process when a gradation value of the video data inputted from outside is on a higher gradation side of performing a white display than a first predetermined gradation value, and if the first amount of current in the case of performing the first process to the gradation value is y , the following relation holds

between the first amount of current y and the second amount of current x:

$$0.20y \leq x \leq 0.60y.$$

4. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein the applied amount of current is determined by acquiring a current value i_1 which is a maximum value of the image data inputted from outside in a first period, acquiring a proper current value i_2 by calculation from the image data inputted in a second period, and sequentially calculating the amount of current applied to each of the pixels displayed based on the predetermined image data inputted in the second period based on a ratio i_2/i_1 .

5. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein the applied amount of current is determined by acquiring a third current value i_3 which is a maximum value of the inputted image data, actually applying a current between the anode and the cathode of each of the self-luminous display elements, acquiring an optimum value as a second current value i_4 and multiplying the inputted image data by a ratio i_4/i_3 and thereby sequentially calculating the amount of current applied to each of the pixels displayed based on the predetermined image data.

6. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein the gradation value of the video data inputted from outside is on a higher gradation side of performing a white display than the first predetermined gradation value, and the amount of current applied between the anode and the cathode of each of the self-luminous elements is controlled by a black insertion rate.

7. The driving method of a self-luminous display apparatus according to claim 6, wherein the black insertion is performed from a first line to a terminal line in turn, and a black area is collectively inserted in one frame.

8. The driving method of a self-luminous display apparatus according to claim 7, wherein the black insertion is performed from the first line to the terminal line, and the black area is inserted into a plurality of areas divided in the one frame.

9. The driving method of a self-luminous display apparatus according to claim 6, wherein the black insertion is performed into a plurality of areas divided in the one frame while interchanging the turn instead of performing it from the first line to the terminal line in turn.

10. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein the gradation value of the video data inputted from outside is on a higher gradation side of performing a white display than the first predetermined gradation value, and the amount of current applied between the anode and the cathode of each of the self-luminous elements is controlled by adjusting the amount of current passing through a group of source lines.

11. The driving method of a self-luminous display apparatus according to claim 10, wherein the adjustment of the amount of current passing through the group of source lines is performed by increasing and decreasing a reference current value.

12. The driving method of a self-luminous display apparatus according to claim 10, wherein the adjustment of the amount of current passing through the group of source lines is performed by increasing and decreasing the number of gradations.

13. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein a difference between a first current passing between the anode and the cathode of each of the self-luminous elements in a first frame period and a second current passing in a second frame period following the first frame period

is acquired, an n difference current value of which difference value is $1/n$ (n is a number of 1 or more) is calculated, and a selection value of a pixel line is determined from the n difference current value.

14. The driving method of a self-luminous display apparatus according to claim 13, wherein the value n is $4 \leq n \leq 256$.

15. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein a γ constant is corrected to be optimum by the amount of current passing between the anode and the cathode of each of the self-luminous elements.

16. The driving method of a self-luminous display apparatus according to claim 15, wherein the γ constant is a set of points on a curve configured by sequentially combining intermediate values of a plurality of γ curves.

17. The driving method of a self-luminous display apparatus according to claim 15, wherein increase and decrease in the γ constant is adjusted based on whether a light emission period of the self-luminous display element is long or short.

18. The driving method of a self-luminous display apparatus according to any one of claims 1 to 3, wherein on and off of the second process is controlled by placing switching instrument for the second processing instrument

so as to determine the amount of current passing between the anode and the cathode of each of the self-luminous element by combining the first process and the second process when turned on and determine it only by the first process when turned off.